



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,439	04/01/2004	Panu K. Zoller	53766US010	2823
32692	7590	08/28/2008		
3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427				
EXAMINER				
CHANG, VICTOR S				
ART UNIT		PAPER NUMBER		
1794				
NOTIFICATION DATE		DELIVERY MODE		
08/28/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

LegalUSDocketing@mmm.com  
LegalDocketing@mmm.com

### Office Action Summary

**Application No.**

10/817,439

**Applicant(s)**

ZOLLER ET AL.

**Examiner**

VICTOR S. CHANG

**Art Unit**

1794

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-53 and 55 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-53 and 55 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Introduction***

1. Applicants' amendments and remarks filed on 7/3/2008 have been entered. Claims 1-53 and 55 are active.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. In response to the amendments, the grounds of rejection have been updated as set forth below. Rejections not maintained are withdrawn.

### ***Rejections Based on Prior Art***

4. Claims 1-3, 7-9, 22-24, 31-32, 35, 38, 40-42, 47-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al. [US 5178924].

Johnson's invention relates to a release liner. In one embodiment, the release liner comprises release layers deposited on the major surfaces of a support sheet, useful for dual functional adhesive tape. The tape is coated with a pressure sensitive adhesive on one side and a heat-activated adhesive on the other side. The tape is wound into roll form with the liner, and the back surface of the liner is in contact with the heat-activated adhesive of the tape [col. 4, ll. 67 through col. 5, ll. 12]. Since a low friction between the liner and the heat-activated adhesive may result in poor roll stability, the liner is treated to increase friction to desired level, e.g., by applying a friction-enhancing agent thereto, such as applying ethylene acrylic acid (release layer) mixtures containing a tackifier (friction agent) to a polyethylene support sheet [col. 5, ll. 19-24].

For claims 1, 2, 9, 22, 32, 35, 40, 41 and 47, since Johnson teaches that various copolymers can be used to form the release layer, including ethylene vinyl acetate, ethylene acrylic acid, etc. [col. 4, ll. 54-65], it would have been an obvious to one of ordinary skill in the art to substitute ethylene acrylic acid copolymer with the ethylene vinyl acetate, and mixing with a desired level of a tackifier for roll stability, because the selection of a known equivalent material based on its suitability for its intended use supported a *prima facie* obviousness determination. See MPEP § 2144.07.

For claims 3 and 42, the phrase "upto about 26 microinches" is interpreted to include zero, hence, the surface roughness is zero.

For claims 7, 23, 31 and 48-49, Johnson teaches that the release liner material can be low, medium or linear low density polyethylene. The low to medium density would include density of up to about 0.92 g/cc [col. 4, ll. 54-65].

For claims 8, 24 and 50, Johnson teaches that the liner can be of multi-layered construction [col. 7, ll. 18-26].

For claim 38, Johnson teaches that silicone is known in the art as a release material [col. 4, ll. 35-40].

For claim 47, the phrase "upto about 5%" is interpreted to include zero, hence the antiblocking amount is zero.

5. Claims 4-5, 43-44 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al. [US 5178924] in view of Reinders [US 6037028].

The teachings of Johnson are again relied upon as set forth above.

For claim 4-5, 43-44 and 55, Johnson teaches olefin-based heat-activated adhesives for the dual-functional double sided adhesive tape [col. 5, ll. 23-24]. Alternatively, Reinders' invention relates to polyethylene based heat activated adhesive layer [col. 5, ll. 36-37] for providing a strong bond. It would have been obvious to one having ordinary skill in the art to incorporate Reinders' polyethylene based heat-activated adhesives to make Johnson's the dual-functional double sided adhesive tape, motivated by the desire to obtain a strong bond.

6. Claims 6, 10-21, 25-30, 33-34, 36-37, 39, 45-46 and 51-53, are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al. [US 5178924] in view of Johnson et al. [US 5167995].

The teachings of Johnson '924 are again relied upon as set forth above.

For claim 6, Johnson '924 lacks a teaching that the pressure sensitive adhesive comprises an acrylic foam pressure sensitive adhesive. However, Johnson '995 relates to a double-sided adhesive assembly having a pressure sensitive adhesive on one side and HAA on the opposite side [col. 4, ll. 40-47]. The adhesive can be acrylic foam based pressure sensitive adhesive [col. 6, ll. 15]. Antiblocking material is contained in the release material [col. 11, ll. 15-23]. It would have been obvious to one having ordinary skill in the art to incorporate antiblocking agent in the release liner, as taught by Johnson '995, in the invention of Johnson'924, motivated by the desire to provide for releasability of the release liner from the heat activated adhesive while maintaining roll stability.

For claim 10, the vinyl acetate content is inherently low in the EVA of Johnson '924 because as explained hereinabove, said EVA is found to be obvious functional equivalent to the

exemplary stability material of ethylene acrylic acid and because the HAA is unrolled from the release liner [Johnson '924, col. 5, lines 15-24].

For claims 11-14, 25-28, 36-37, 39 and 51-53, the content of vinyl acetate to be less than 28% by wt., 5-24% by wt., 8-20% by wt., or about 12% by wt., would have been obvious optimization for providing stability to the roll, while permitting unwinding of the tape from said roll.

For claims 15-16 and 29-30, the phrase "upto about 5%" is interpreted to include zero, hence the antiblocking amount is zero.

For claims 17-19, since the collective teachings of prior art render the composition of the instant invention obvious, a workable coefficient of friction of the roll stability layer is deemed to be an obvious routine optimization, motivated by the desire to obtain desired levels of friction for roll stability.

For claim 20-21, the tape outer circumferential diameter being at least 20 times the width,, it would have been obvious to one having ordinary skill in the art to modify Johnson by providing the roll diameter to be at least 20 times the width of the tape, based on optimization through routine experimentation, with the roll stability layer therewith.

For claims 33-34, the release layer comprises low density polyethylene having density of about 0.92 g/cc [Johnson '924].

#### ***Response to Arguments***

7. Applicants argue at Remarks page 2 that

"the mere fact that two materials are listed as alternatives for one purpose (e.g., as a release material) does not provide a logically or legally sufficient basis for concluding

that those two materials are functionally equivalent for any other purpose (e.g., as a roll stability layer or as a friction enhancing agent).”

However, since Johnson ‘924 teaches modifying the release layer with tackifier (friction agent) to obtain improved roll stability, it is unseen that replacing the base copolymer of the release layer, exemplified ethylene acrylic acid copolymer, prevents surface property modifying effect of a tackifier (friction agent).

Applicants’ arguments at pages 3-4 directed to withdrawn evidentiary reference Gronnevik are moot.

### ***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to VICTOR S. CHANG whose telephone number is (571)272-1474. The examiner can normally be reached on 7:00 am - 5:00 pm, Tuesday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Victor S Chang/  
Examiner, Art Unit 1794